

Sanford D. Porter

Curriculum Vitae

January 1989

Personal

Age: 35
Married, 3 children
Phone W: (512) 472-2783
H: (512) 280-0124

Address:
Department of Zoology
University of Texas
Austin, TX 78712

Education

Ph.D. - Biological Science Florida State University (1984)

Walter R. Tschinkel, Major Professor

M.S. - Zoology and Entomology Brigham Young University, Utah (1980)

Clive D. Jorgensen, Major Professor

B.S. - Zoology (cum laude) Brigham Young University, Utah (1978)

Honors Program Graduate (High Honors)

Grants and Fellowships

National Science Foundation - Thermoregulation and the effects of temperature on fire ants (1984-1986, written by myself and submitted with Dr. Walter R. Tschinkel).

Traineeship - Psychobiology Research Center, FSU, \$6000 per year research stipend, 1980-1983.

Honors Received

- 1982 - Robert T. Gast Award (best student paper, Entomological Society of America, Southeastern Branch Meetings)
- 1980 - Member Sigma Xi
- 1979 - D Eldon Beck Award, \$1,000 (Outstanding Graduate Student in Natural History, BYU)
- 1979-80 - Julia Greenwell Awards, \$1,000 (Tuition Waivers, College of Biological and Agricultural Sciences, BYU)
- 1977-80 - Zoology Department Tuition Waivers, BYU

Employment History

Research

1986-present. Research Associate and Lecturer, Department of Zoology, University of Texas at Austin. Dr. Larry E. Gilbert, supervisor; Roger A. Mulder, Fire ant program coordinator.

Responsibilities: A) Conduct basic research on fire ant biology, B) Provide technical advice and training for the Texas Department of Agriculture, C) Test new control products, D) supervise student research projects, E) Teach general biology.

1984-1986. Postdoctoral Research Associate, Department of Biological Science, Florida State University, Tallahassee. Dr. Walter R. Tschinkel, principle investigator.

Responsibilities: Designed and carried out research on an NSF-funded study of fire ant thermoregulation.

1980-1984. Doctoral student and Psychobiology Trainee, Department of Biological Science, Florida State University, Tallahassee. Dr. Walter R. Tschinkel, Advisor.

Responsibilities: Non-duty research fellowship. Investigated economic benefits of worker polymorphism in fire ant colonies.

1977-1980. Masters student and research assistant, Department of Zoology, Brigham Young University, Provo, Utah. Dr. Clive D. Jorgensen, Advisor and supervisor.

Responsibilities: Conducted research on harvester ant social structure and population dynamics as part of an environmental monitoring program funded by the Department of Energy.

Teaching

General Biology - University of Texas, Austin (Fall 1988)
Responsible for lectures and directing discussion sections. 210 students.

General Biology - University of Texas, Austin (Fall 1986)
Responsible for lectures and directing discussion sections. 220 students.

General Entomology - Brigham Young University (Spring 1986)
Responsible for entire course including lectures and laboratory exercises.

General Entomology - Timpanogos Biological Station, BYU (Spring 1980)
Directed laboratory portion of course, organized and led field trips, assisted students with preparation and identification of insect collections.

Plant Classification - Timpanogos Biological Station, BYU (Spring 1980)
Assisted with field trips and plant identifications.

General Biology - Brigham Young University (Fall 1979 - Winter 1980)
Assisted with the development of a laboratory/lecture course for non-majors. Duties included preparing and testing new laboratory exercises and lectures.

Bioethics - Brigham Young University (Winter 1980)
Assisted with lectures and directed discussion group. Topics included organ transplants, abortion, evolution, genetic engineering, biological warfare, etc.

Vertebrate Zoology & Embryology - Brigham Young University (Fall 1979)
Delivered laboratory lectures and assisted students with dissection of specimens from the various vertebrate classes and orders.

Reviewer

Science	Ann. Entomol. Soc. Am.	Economic Entomology
Ecology	Canadian J. Forest Res.	Canadian Entomologist
BioScience	Ecological Entomology	Texas Journal of Science
Psyche	Florida Entomologist	J. Kansas Entomol. Soc.
	Entomological News	Environmental Entomology

Society Memberships

Entomological Society of America
International Union for the Study of Social Insects
Chairman - Journal Committee, NAS
Cambridge Entomological Society
Florida Entomological Society
Kansas Entomological Society

Technical Skills

Statistics and Experimental Design - analysis of variance, analysis of covariance, multiple regression and various non-parametric techniques.
Ecological Sampling Methods - such as used for insects, plants and small mammals.
Curation of Insect Collections - collecting, mounting and identifying insects; personal collection includes over 350 families and several thousand specimens. Major areas of emphasis are Lepidoptera (moths) and Formicidae.
Photography - close-up, copywork, developing and printing (B&W and color).
Languages - Indonesian (fluent).

Symposia and Invited Lectures

- "Effects of the imported fire ant, emphasizing the invertebrate ecosystem", Texas Governor's Symposium, The imported fire ant: Assessment and recommendations. Austin, TX, October 1988.
- "Recent developments in fire ant research", Amer. Farm Bureau Federation, Fire Ant Advisory Committee Meeting, San Antonio, TX, April 1988
- "Thermoregulation and the effects of temperature on fire ants", Department of Entomology, Texas A&M University, September 1987
- "Fire ant thermoregulation", Insects Affecting Man and Animals Research Laboratory, USDA-ARS, Gainesville, Florida, July 1987
- "Fire ant polymorphism: adaptive value of worker size variation", Cambridge Entomological Society, Harvard University, March 1985
- "Survivorship of foraging Pogonomyrmex and Atta workers", Foraging in Social Insects Symposium, National Meetings, Entomological Society of America, Atlanta, Georgia, 1980
- "Foragers of the harvester ant, Pogonomyrmex owychiei: a disposable caste?", Natural History Seminar, Florida State University, 1980

Publications

submitted

Porter, S.D. and Savignano, D. An invasion of polygyne fire ants (*Solenopsis invicta*) decimates native ant fauna. Ecology

Tennant, L.E. and Porter, S.D. Diets of two fire ant species (Hymenoptera: Formicidae: *Solenopsis*): solid and liquid aspects. Ann. Entomol. Soc. Am.

Porter, S.D. Effects of boric acid baits on laboratory fire ant colonies. Fla. Entomol.

Porter, S.D. Effects of diet on the growth of laboratory fire ant colonies. J. Kans. Entomol. Soc.

Porter, S.D. and Jorgensen, C.D. Psammophores: Do western harvester ants transport seeds in their pouch?

Calabi, P. and Porter, S.D. Worker longevity in the fire ant *Solenopsis invicta*: correlations between temperature, size and metabolic rates. J. Insect Physiol.

in press

Vargo, E.L. and Porter, S.D. Colony reproduction by budding in the polygyne form of the fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae). Ann. Entomol. Soc. Am.

published

Porter, S.D. 1988. Impact of temperature on Colony Growth and Developmental Rates of the Ant, *Solenopsis invicta*. J. Insect Physiol. 34:1127-1133.

Porter, S.D., Van Eimeren, B., and Gilbert, L. E. 1988. Invasion of red imported fire ants (Hymenoptera: Formicidae): microgeography of competitive replacement. Ann. Entomol. Soc. Am. 81:913-918.

Porter, S.D. and Jorgensen, C.D. 1988. Longevity of harvester ant colonies in southern Idaho. J. Range Manage. 41:104-107.

Tschinkel, W.R. and Porter, S.D. 1988. The efficiency of sperm use in queens of the fire ant *Solenopsis invicta* Buren. Ann. Entomol. Soc. Am. 81:777-781.

Porter, S.D. and Tschinkel, W.R. 1987. Foraging in the fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae): effects of weather and season. Environ. Entomol. 16:802-808.

Porter, S.D. and Tschinkel, W.R. 1986. Adaptive value of nanitic workers in newly founded imported fire ant colonies (Hymenoptera: Formicidae). Ann. Entomol. Soc. Am. 79:723-726.

Porter, S.D. 1986. Revised respiration rates for the southern harvester ant, *Pogonomyrmex badius*. Comp. Biochem. Physiol. 83A:197-198.

Publications (cont.)

- Porter, S.D. and Tschinkel, W.R. 1985. Fire ant polymorphism: the ergonomics of brood production. *Behav. Ecol. Sociobiol.* 16:323-336.
- Porter, S.D. and Tschinkel, W.R. 1985. Fire ant polymorphism (Hymenoptera: Formicidae): factors affecting worker size. *Ann. Entomol. Soc. Am.* 78:381-386.
- Porter, S.D. 1985. Masoncus spider: a miniature predator of Collembola in harvester ant colonies. *Psyche* 92:145-150.
- Porter, S.D. 1983. Fast, accurate method of measuring ant head widths. *Ann. Entomol. Soc. Am.* 76:866-867.
- Porter, S.D. and Eastmond, D.A. 1982. Euryopis coki (Theridiidae), a spider that preys on Pogonomymex ants. *J. Arachnol.* 10:275-278.
- Jorgensen, C.D. and Porter, S.D. 1982. Foraging behavior of Pogonomymex owyheeii in southeast Idaho. *Environ. Entomol.* 11:381-384.
- Porter, S.D. and Jorgensen, C.D. 1981. Foragers of the harvester ant, Pogonomymex owyheeii: A disposable caste? *Behav. Ecol. Sociobiol.* 9:247-256.
- Porter, S.D. and Bowers, M.A. 1981. Emigration of an Atta colony. *Biotropica*. 12:232-233.
- Bowers, M.A. and Porter, S.D. 1981. Effect of foraging distance on water content of substrates harvested by Atta colombica (Guer.). *Ecology* 62:273-275.
- Porter, S.D. and Jorgensen, C.D. 1980. Recapture studies of the harvester ant, Pogonomymex owyheeii Cole, using a fluorescent marking technique. *Ecol. Entomol.* 5:263-269.